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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,734	05/17/2007	Ulrich Lange	2133.131USU	5438

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EXAMINER

DEGHAN, QUEENIE S

ART UNIT	PAPER NUMBER
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1791

MAIL DATE	DELIVERY MODE
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09/17/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,734	Applicant(s) LANGE ET AL.	
	Examiner Queenie Dehghan	Art Unit 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 44-63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 April 2008 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/6/06</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of claims 44-63 in the reply filed on June 25, 2008 is acknowledged.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Several reference characters are not mentioned in the description including, but are not limited to, item 37 and item 39 in figure 4c. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in references in the drawings. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the body boundary in

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claim 46 is not referenced in the drawings and must be shown or the feature(s) canceled from the claim(s). Furthermore, the "break-off edge" or shell boundary recited in claim 47 is not referenced in the drawings and must be shown or the feature(s) canceled from the claims(s). Also, the temperature control device featured in claims 56-60 is not referenced in the drawings and must be shown or the feature(s) canceled from the claims(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

5. The disclosure is objected to because of the following informalities: The first paragraph refers to claims that are cancelled. Furthermore, page 15 recites "a boundary of the displacement body (16, 25)". An item cannot be identified with two reference numbers.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 44-47, 49-55, 56-57, 59 and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by Danner (2,462,805). Danner discloses an apparatus for producing hollow strands by drawing molten glass in a drawing direction comprising a nozzle having an outer shell (67) and a needle (11), the nozzle extending in the drawing direction (figure 6), and a displacement body (53) projecting out of the nozzle in the drawing direction, the displacement body comprising a hollow body that is open to the

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glass and arranged in the nozzle between the outer shell and the needle (figure 6, col. 7 lines 2-64).

8. Regarding claim 45, figure 6 depicts a displacement body that has an internal diameter of 0.9mm and a projection portion out of the nozzle of 0.8mm, which is at least half the cross sectional dimension of the internal diameter of the displacement body. Even if measurements were taken at the outer diameter, the outer diameter measures at 1.4mm, making 0.8mm still more than half the cross sectional dimension of the outer diameter.

9. Regarding claim 46, the displacement body (53) comprises a body boundary ending in a point that located outside the nozzle and in contact with the molten glass (figure 6).

10. Regarding claim 47, the outer shell comprises a shell boundary in contact with the hollow strand, the shell boundary comprising a break off edge in the drawing direction, wherein detaching of the hollow strand from the nozzle takes place at the break off edge (fig 6).

11. Regarding claim 49, Danner discloses connecting elements (78) for connecting the displacement body to the nozzle (figure 6, col. 7 lines 14-33).

12. Regarding claim 50, the displacement body is supported by elements (78), appearing to allow for the displacement body to sit on the elements, which would evidently allow for the vertical movement of the displacement body with respect to the nozzle (figure 6).

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13. Regarding claims 51-52, the outer shell and displacement body is cylindrical (items 67 and 53 respectively in figures 6&7).

14. Regarding claim 53, the displacement body is arranged coaxially with the nozzle (fig. 7).

15. Regarding claim 54, the displacement body and said nozzle define a gap there between (at vicinity of 77 in fig. 6), said gap capable of permitting a predeterminable throughput at a given viscosity of the at least one settable liquid (col. 7 lines 30-33).

16. Regarding claim 55, the displacement body comprises dimensions that are not constant in a plane that is perpendicular to a longitudinal axes of said at least one displacement body, as can be seen by the point profile of the displacement body in the drawing direction (fig. 6).

17. Regarding claims 56-57 and 59, Danner teaches a temperature-control device for controlling a temperature of said outer shell and/or of said at least one displacement body, wherein the temperature-control device comprises a muffle (44) arranged all around as well as beneath the nozzle and a temperature control element (84) having a variably adjustable position (col. 8 lines 19-51)

18. Regarding claim 63, Danner discloses a device for generating a pressure difference between an interior and an exterior of the hollow strand (col. 16 lines 12-26).

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

21. Claims 48 and 56-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danner (2,462,805) in view of Mueller et al. (2004/0065115). Danner fail to disclose a material for the shell boundary and a temperature control device. Regarding claim 48, Mueller teaches a shell boundary that is in contact with the molten glass at the break-off edge comprising a material (platinum alloy) that is poorly wetted by molten glass ([0087]). It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the material of Mueller in the shell boundary of Danner because of its ability to resist corrosion.

22. Regarding claims 58 and 60, Mueller teaches a temperature-control device for controlling a temperature of said outer shell and/or of said at least one displacement body, wherein the temperature-control device comprises an inductive heating device (20) and at least two temperature-control elements that are independent of one another (elements 15, 20 in figure 2, [0088]-[0090]). It would have been obvious to one of

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ordinary skill in the art at the time of the invention to have utilized the feature of the temperature control device of Mueller in the apparatus of Danner as known alternatives and additional features for the better control of an area of a drawing apparatus wherein the temperature of the drawn glass is critical to the achieving the finished product.

23. Claim 61 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danner (2,462,805) in view of Reese (4,141,709). Danner does not discuss applying liquid to the hollow strand (fig 3, col. 1 line 67 to col. 2 line7). Reese teaches a device for applying a liquid to drawn strands to cool the fibers. It would have been obvious to one of ordinary skill in the art at the time of the invention to have utilized the device of Reese in the apparatus of Danner in order to cool the strands quickly for easier handling as taught by Reese.

24. Claim 62 is rejected under 35 U.S.C. 103(a) as being unpatentable over Danner (2,462,805) in view of Vatterodt (3,212,871). Danner fail to disclose the material for the displacement body. Vatterodt teaches an apparatus for drawing glass tubing, wherein several parts involved in contact with molten glass are made of a refractory metal such as molybdenum (col. 4 lines 49-50). It would have been obvious to one of ordinary skill in the art at the time of the invention to have similarly used such a material the displacement body of Danner since it is known that refractory metal such as molybdenum has a high melting point that can resist the high temperatures of molten glass.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Queenie Dehghan whose telephone number is (571)272-8209. The examiner can normally be reached on Monday through Friday 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/
Supervisory Patent Examiner, Art
Unit 1791

Q Dehghan